UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
ROBERTS, JESSICA M

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _04/30/2008_.

2a)☒ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-27_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-27_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

  * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments with respect to claim 1-27 have been considered but are

moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.   The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

> 1.   Determining the scope and contents of the prior art.
> 2.   Ascertaining the differences between the prior art and the claims at issue.
> 3.   Resolving the level of ordinary skill in the pertinent art.
> 4.   Considering objective evidence present in the application indicating
>   obviousness or nonobviousness.

4.   Claims 1-27 are rejected under 35 U.S.C. 103 (a) as being unpatentable over

Pavlidis ET al.: Urban Surveillance Systems, 2001 in view of Monroe et al., US-

2003/0025599 and further in view of Flickner et al., US-2003/0107649A1.

        Regarding **claim 1**, Pavlidis discloses a method of detecting motion in an area

the method comprising: receiving frames of the area (Pavlidis, DETER, *Introduction* pg.

1478 and Fig. 3 and 4); using a high performance motion detection algorithm on

remaining frames to detect true motion from noise (Pavlidis, the connected component

algorithm filters out blobs with area less than 27 pixels as noise, *C. Multiple Hypotheses*

Predictive Tracking pg. 1448 and Section V). Pavlidis is silent in regards to using a high-

speed motion detection algorithm to remove frames in which a threshold amount of

motion is not detected; wherein a plurality of the frames comprises a selected portion of

a frame with a first pixel color distribution that does not represent any motion of interest;

wherein the plurality of the frames comprises a selected portion of a frame with the first

pixel color distribution and another portion of the frame with a second pixel color

distribution.   However, Monroe discloses a high-speed motion detection algorithm to

remove frames in which a threshold amount of motion is not detected (only changes in

the data need be transmitted; see page 4, paragraph [0032], [0033]).

Therefore it would have been obvious to one of ordinary skill in the art at the time

of the invention to combine the method of Pavlidis with the teaching of Monroe for

providing computational efficiency and minimizing the amount of data to be transmitted

without any loss of critical change data (Monroe, [0054]).

5.   Pavlidis (modified by Monroe) as a whole is silent in regards to wherein a

wherein the high speed motion detection algorithm represents the frames, wherein a

plurality of the frames comprises a selected portion of a frame with a first pixel color

distribution that does not represent any motion of interest; wherein the plurality of the

frames comprises a selected portion of a frame with the first pixel color distribution and

another portion of the frame with a second pixel color distribution.

6.   However, Flickner teaches wherein a plurality of the frames comprises a selected

portion of a frame with a first pixel color distribution that does not represent any motion

of interest (Flickner teaches in the first stage, a temporal median filter is applied to several seconds of video (typically 20-40 seconds) to distinguish "moving pixels" (pixels corresponding to moving objects) from "stationary pixels" (pixels corresponding to stationary objects) by monitoring color and assuming that a color that predominates at a given pixel over time is representative of the background image, since any object corresponding to a foreground image is expected to move in and out of the camera's view over time [0025]. Since Flickner discloses to determine moving pixel from stationary pixels by monitoring color and to predominate at a given time to be considered background, it is clear to the examiner that Flickner teaches to have a portion of the frame that is stationary represented with a color distribution, which reads upon the claimed limitation); wherein the plurality of the frames comprises a selected portion of a frame with the first pixel color distribution and another portion of the frame with a second pixel color distribution (Flickner teaches in the first stage, a temporal median filter is applied to several seconds of video (typically 20-40 seconds) to distinguish "moving pixels" (pixels corresponding to moving objects) from "stationary pixels" (pixels corresponding to stationary objects) by monitoring color and assuming that a color that predominates at a given pixel over time is representative of the background image, since any object corresponding to a foreground image is expected to move in and out of the camera's view over time [0025]. Further disclosed is that shopping carts themselves (and moving inanimate objects generally) may be detected using color (step 140). The color of shopping carts may be modeled using a single 3-D Gaussian distribution, with the pixel of any foreground silhouette pixel that has a color

similar to that distribution being classified as a pixel belonging to a shopping cart,

[0032]. Since Flickner discloses to determine moving pixel from stationary pixels by

monitoring color and to predominate at a given time to be considered background, it is

clear to the examiner that Flickner teaches to have a portion of the frame that is

stationary represented with a color distribution, and distinguish objects using a 3-D

Gaussian distribution, with the pixel of any foreground silhouette pixel that a color

similar to distribution, it is clear to the examiner that Flickner discloses to represent

foreground and background pixel in different color distributions which reads upon the

claimed invention).

7.   Therefore, it would have been obvious to one of ordinary skill in the art at the

invention to incorporate the teachings of Flickner with Pavlidis (modified by Monroe) for

allowing for more efficient tracking of persons and activities [0004].

Regarding **claim 2**, Pavlidis (modified by Flickner) is silent in regards to the high-

speed detection algorithm operates in a compressed image domain. However, Monroe

teaches the high-speed detection algorithm operates in a compressed image domain

(Monroe, [compressed digital images; page 4, paragraph [0028]).

Therefore it would have been obvious to one of ordinary skill in the art at the time

of the invention to combine the method of Pavlidis (modified with Flickner) with the

teaching of Monroe for providing computational efficiency and minimizing the amount of

data to be transmitted without any loss of critical change data (Monroe, [0054]).

Regarding **claim 3**, Pavlidis (modified by Flickner) is silent in regards to the high

speed detection algorithm operates in an uncompressed image domain. However,

Monroe teaches the high speed detection algorithm operates in an uncompressed image domain (Monroe, optionally compressed; page 16, paragraph [0212]) image domain.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the method of Pavlidis (modified by Flickner) with the teaching of Monroe for providing computational efficiency and minimizing the amount of data to be transmitted without any loss of critical change data (Monroe, [0054]).

Regarding **claim 4**, Pavlidis (modified by Monroe and Flickner) as a whole further teach the high performance detection algorithm operates in an image pixel domain (Pavlidis, motion segmentation through a multi-normal representation at the pixel level, pg 1482, first column).

Regarding **claim 5**, Pavlidis (modified by Monroe and Flickner) as a whole further teach the high speed motion detection algorithm represents portions of images in grey scale pixels (Pavlidis, *V. Optical and System Design,* pg 1482).

Regarding **claim 6**, Pavlidis (modified by Monroe and Flickner) as a whole further teach the image are represented in grey scale when such portions are not high in color content (Pavlidis, *V. Optical and System Design,* pg 1482).

Regarding **claim 7**, Pavlidis (modified by Monroe and Flickner) as a whole further teach the selected portions of the images are low in color content (Pavlidis discloses the use of a dual channel camera system that uses a medium resolution color camera during the day, and a high resolution grey scale camera during the night, V. *Optical and*

System Design, page 1482. Monroe discloses the ability to select areas of a selected scene for monitoring activity level paragraph [0044]).

Regarding **claim 8**, Pavlidis (modified by Monroe and Flickner) as a whole further teach the portions are based on an initial set up (Pavlidis. VI. Object Segmentation and Tracking, *Initialization*, pg. 1484, Monroe discloses defaulting and programmable modes; page 4, paragraph [0028]).

Regarding **claim 9**, Pavlidis (modified by Flickner) is silent in regards to wherein the selected portions are determined based on a real time assessment of dynamic change in the area. However, Monroe teaches wherein the selected portions are determined based on a real time assessment of dynamic change in the area (Monroe, [0045]).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the method of Pavlidis (modified by Flickner) with the teaching of Monroe for providing computational efficiency and minimizing the amount of data to be transmitted without any loss of critical change data (Monroe, [0054]).

Regarding **claim 10**, Pavlidis (modified by Flickner) is silent in regards to the threshold is predetermined. However, Monroe teaches wherein the threshold is predetermined (defined threshold would be indicative of motion; page 8 paragraph [0115]).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the method of Pavlidis (modified by Flickner) with the

teaching of Monroe for providing computational efficiency and minimizing the amount of

data to be transmitted without any loss of critical change data (Monroe, [0054]).

Regarding **claim 11**, Pavlidis (modified by Flickner) is silent in regards to the

area is a predetermined area. However, Monroe discloses the area is a predetermined

area (remote; page 8 paragraph [0108]) area.

Therefore it would have been obvious to one of ordinary skill in the art at the time

of the invention to combine the method of Pavlidis (modified by Flickner) with the

teaching of Monroe for providing computational efficiency and minimizing the amount of

data to be transmitted without any loss of critical change data (Monroe, [0054]).

Regarding **claim 12**, Pavlidis (modified by Monroe and Flickner) as a whole

further teach the frames comprise pixels, and where such pixels are group in blocks of

pixel, each block being represented as an average or median in the color domain

(Pavlidis, pg 1485, first column).

Regarding **claim 13**, Pavlidis (modified by Flickner) is silent in regards to the

blocks of pixels are of different sizes. However, Monroe teaches wherein the blocks of

pixels are of different sizes (decimation various numbers of pixels will effectively change

the sizes of pixel blocks; page 9 paragraph [0118]).

Therefore it would have been obvious to one of ordinary skill in the art at the time

of the invention to combine the method of Pavlidis (modified by Flickner) with the

teaching of Monroe for providing computational efficiency and minimizing the amount of

data to be transmitted without any loss of critical change data (Monroe, [0054]).

Regarding **claim 14**, Pavlidis (modified by Flickner) is silent in regards to the

area requiring higher resolution to detect motion are represented by blocks of smaller

number of pixels. However, Monroe teaches wherein portions of the area requiring

resolution to detect motion are represented by blocks of smaller number of pixels (page

9, paragraph [0116] and fig. 2:21-24) Monroe discloses using the histogram to

determine the degree of change, where pixels are grouped according the value of

change.

Therefore it would have been obvious to one of ordinary skill in the art at the time

of the invention to combine the method of Pavlidis (modified by Flickner) with the

teaching of Monroe for providing computational efficiency and minimizing the amount of

data to be transmitted without any loss of critical change data (Monroe, [0054]).

Regarding **claim 15**, Pavlidis (modified by Flickner) is silent in regards to the

number of pixels in the blocks is varied based on depth of field. However, Monroe

teaches wherein the number of pixels in the block is varied based on depth of field (the

degree of motion; page 9, paragraph [0121] and see fig. 3: 34).

Therefore it would have been obvious to one of ordinary skill in the art at the time

of the invention to combine the method of Pavlidis (modified by Flickner) with the

teaching of Monroe for providing computational efficiency and minimizing the amount of

data to be transmitted without any loss of critical change data (Monroe, [0054]).

Regarding **claim 16**, Pavlidis teach a method of detecting motion in an area

(DETER, a prototype urban surveillance system, *Introduction*, pg 1478), the method

comprising: receiving frames of the area (DETER, *Introduction* pg. 1478 and Fig. 3 and

4); using a high speed motion detection algorithm to remove frames in which a

threshold of motion is not detected; using a high performance motion detection

algorithm on remaining frames to detect true motion from noise (Pavlidis, the connected

component algorithm filters out blobs with area less than 27 pixel as noise VI. *C.*

Multiple Hypothesis Predictive Tracking, pg. 1488), wherein the frames comprise pixel

(motion segmentation though a multi-normal representation at the pixel level, pg 1482),

and where such pixels are grouped in blocks of pixels, each block being represented as

a single average pixel (Jefferys divergence measures pg 1485-1487); and initializing a

model of the area comprising multiple weighted distributions for each block of pixels

(mixture of Normals; Pavlidis, *III.* Relevant Technical Work, page 1481 and VI. Object

Segmentation and Tracking: *A. Initializing*, page 1485-1487).   Pavlidis is silent in

regards to using a high speed motion detection algorithm to remove frames in which a

threshold of motion is not detected; wherein a plurality of the frames comprises a

selected portion of a frame with a first pixel color distribution that does not represent any

motion of interest; wherein the plurality of the frames comprises a selected portion of a

frame with the first pixel color distribution and another portion of the frame with a

second pixel color distribution.

However, Monroe discloses using a high speed motion detection algorithm to

remove frames in which a threshold of motion is not detected (see page 4, paragraph

[0032], [0033]). Therefore it would have been obvious to one of ordinary skill in the art

at the time of the invention to combine the method of Pavlidis with the teaching of

Monroe for providing computational efficiency and minimizing the amount of data to be transmitted without any loss of critical change data (Monroe, [0054]).

8.   Pavlidis (modified by Monroe) as a whole is silent in regards to wherein the high speed motion detecting algorithm represents the frames, wherein the plurality of the frames comprises a selected portion of a frame with a first pixel color distribution that does not represent any motion of interest; wherein the plurality of the frames comprises a selected portion of a frame with the first pixel color distribution and another portion of the frame with a second pixel color distribution.

9.   However, Flickner teaches wherein a plurality of the frames comprises a selected portion of a frame with a first pixel color distribution that does not represent any motion of interest (Flickner teaches in the first stage, a temporal median filter is applied to several seconds of video (typically 20-40 seconds) to distinguish "moving pixels" (pixels corresponding to moving objects) from "stationary pixels" (pixels corresponding to stationary objects) by monitoring color and assuming that a color that predominates at a given pixel over time is representative of the background image, since any object corresponding to a foreground image is expected to move in and out of the camera's view over time [0025]. Since Flickner discloses to determine moving pixel from stationary pixels by monitoring color and to predominate at a given time to be considered background, it is clear to the examiner that Flickner teaches to have a portion of the frame that is stationary represented with a color distribution, which reads upon the claimed limitation); wherein the plurality of the frames comprises a selected portion of a frame with the first pixel color distribution and another portion of the frame

with a second pixel color distribution (Flickner teaches in the first stage, a temporal

median filter is applied to several seconds of video (typically 20-40 seconds) to

distinguish "moving pixels" (pixels corresponding to moving objects) from "stationary

pixels" (pixels corresponding to stationary objects) by monitoring color and assuming

that a color that predominates at a given pixel over time is representative of the

background image, since any object corresponding to a foreground image is expected

to move in and out of the camera's view over time [0025]. Further disclosed is that

shopping carts themselves (and moving inanimate objects generally) may be detected

using color (step 140). The color of shopping carts may be modeled using a single 3-D

Gaussian distribution, with the pixel of any foreground silhouette pixel that has a color

similar to that distribution being classified as a pixel belonging to a shopping cart,

[0032]. Since Flickner discloses to determine moving pixel from stationary pixels by

monitoring color and to predominate at a given time to be considered background, it is

clear to the examiner that Flickner teaches to have a portion of the frame that is

stationary represented with a color distribution, and distinguish objects using a 3-D

Gaussian distribution, with the pixel of any foreground silhouette pixel that a color

similar to distribution, it is clear to the examiner that Flickner discloses to represent

foreground and background pixel in different color distributions which reads upon the

claimed invention).

10.   Therefore, it would have been obvious to one of ordinary skill in the art at the

invention to incorporate the teachings of Flickner with Pavlidis (modified by Monroe) for

allowing for more efficient tracking of persons and activities [0004].

Regarding **claim 17**, Pavlidis (modified by Flickner) is silent in regards to the

frames comprise blocks of pixels, and wherein a number of weighted distributions per

block is varied. However, Monroe discloses wherein the frames comprise blocks of

pixels, and wherein a number of weighted distributions per block is varied (Monroe,

continuous variable; page 9, paragraph [0121]).

Therefore it would have been obvious to one of ordinary skill in the art at the time

of the invention to combine the method of Pavlidis (modified by Flickner) with the

teaching of Monroe for providing computational efficiency and minimizing the amount of

data to be transmitted without any loss of critical change data (Monroe, [0054]).

Regarding **claim 18**, Pavlidis (modified by Monroe and Flickner), further teaches

the number of weighted distributions varies (Monroe, continuous variable; page 9,

paragraph [0121]) between 1 and 5 (Pavlidis, see VI. Object Segmentation and

Tracking, page 1485).

Regarding **claim 19**, the Pavlidis (modified by Monroe and Flickner), as a whole

further teach the number of weighted distributions is varied based on dynamics of

motions or expectations (Pavlidis, VI. Object Segmentation and Tracking, *Model Update*

When a Match is Found, pg. 1486-1487).

Regarding **claim 20**, Pavlidis (modified by Monroe and Flickner), as a whole

further teach the model is based on N successive frames and the weight is based on a

count (Pavlidis, VI. Object segmentation and Tracking, *A. Initialization page* 1484-1485)

Regarding **claim 21**, see analysis and rejection of claim 16. Furthermore, a

predefined number of weighted distributions is selected for each block of pixels, and

wherein the weights are normalized as claimed are discussed in the combined teaching of Monroe and Pavlidis (mixture of Normals; Pavlidis, *III. Relevant Technical Work*, page 1481 and VI. Object Segmentation and Tracking: *A. Initializing*, page 1485).

Regarding **claim 22**, Pavlidis (modified by Monroe and Flickner) as a whole further teach if pixels in a new frame match the model, the model weights and distributions are updated (Pavlidis, VI. Object Segmentation and Tracking: *A. Initializing*, page 1485).

Regarding **claim 23**, Pavlidis (modified by Monroe and Flickner) as a whole further teach a (modified Jeffery's measure) is used to determine a match or non-match in the distributions (Pavlidis; VI. Object Segmentation and Tracking, *B Segmentation of Moving Objects*: The Matching Operation, page 1486).

Regarding **claim 24**, Pavlidis (modified by Monroe and Flickner) as a whole further teach a predetermined number of frames have pixels or blocks that do not match the model, the lowest weighted distributions of the pixels or blocks of a background are removed from the model and replaced by ones derived from a foreground distribution once a derived number of sequences is reached within the last N successive frames (Pavlidis, VI. Object Segmentation and Tracking *B. Segmentation of Moving Objects:* Model Update When a Match is Not Found; page 1487).

Regarding **claim 25**, Pavlidis (modified by Flickner) is silent in regards to the high speed motion detection algorithm operates in a compressed image domain. However, Monroe teaches wherein the high speed motion detection algorithm operates in a compressed image domain (see Monroe, page 4, paragraph [0029]).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the method of Pavlidis (modified by Flickner) with the teaching of Monroe for providing computational efficiency and minimizing the amount of data to be transmitted without any loss of critical change data (Monroe, [0054]).

Regarding **claim 26**, Pavlidis (modified by Flickner) is silent in regards to the high speed motion detection algorithm operates in an uncompressed image domain. However, Monroe teaches wherein the high speed motion detection algorithm operates in an uncompressed image domain (in Monroe, the calculation of the difference between two images is tabulated <u>uncompressed</u> or compressed, see page 4, paragraph [0032], also page 16, paragraph 0212, <u>optionally compressed</u>).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the method of Pavlidis (modified by Flickner) with the teaching of Monroe for providing computational efficiency and minimizing the amount of data to be transmitted without any loss of critical change data (Monroe, [0054]).

1.   Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Monroe et al., US-2003/0025599 in view of Pavlidis et al.: Urban Surveillance Systems, 2001 and in further view of Flickner et al., US-2003/0107649 A1.

Regarding **claim 27**, Monroe discloses a system for detecting motion in a monitored area, the system comprising: means for receiving video images of the monitored area; a fast video motion segmentation (VMS) module that rejects still images that do not portray any motion (motion of the fan is not detected as motion, and does not cause unnecessary transmission and storage of still image data page 9,

paragraph [0121]); a robust VMS module that detects motion of an object in the monitored area (remote area; page 3, paragraph [0026]) ; and a resource management controller that initializes, controls, and adapts the fast and robust VMS modules; (adaptive; page 9, paragraph [0123] and page 10, paragraph [0124]. Monroe discloses that the system is adaptive, thus necessitates a controller to initialize, control, and adapt the system for motion detection. Monroe is silent in regards to wherein the VMS module operates on frames having pixels in grey scale for selected portions of the images, and operates on frames having pixels in RGB or other color domain for other portions of the images.

Pavlidis teaches wherein the VMS module operates on a frame having pixels in grey scale for a selected portion of the frame, and operates on the frame having pixels in RGB or other color domain for another portion of the frame (dual channel camera systems. These systems utilize a medium-resolution color camera during the day and a high resolution gray scale camera during the night, wherein the VMS module operates on frames having pixels in grey scale for selected portions of the images, and operates on frames having pixels in RGB or other color domain for other portions of the images. Further, disclosed is the camera is capable of operating both the color and grey scale domain, which reads upon the claimed limitation. V. Optical and System Design, pg 1482-1483).

Therefore it would have been obvious to one of ordinary skill in the art at time of the invention to combine the method of Monroe with the teaching of Pavlidis dual channel camera for improving processing speed and accuracy as discussed in Pavlidis.

Monroe (modified by Pavlidis) is silent in regards to wherein the motion detection

algorithm represents frames, wherein a plurality of the frames comprises a selected

portion of a frame with a portion of a frame with a first pixel color distribution that does

not represent any motion of interest; wherein the plurality of the frame comprises a

selected portion of a frame with the first pixel color distribution and another portion of

the frame with a second pixel color distribution.

11.   However, Flickner teaches wherein a plurality of the frames comprises a selected

portion of a frame with a first pixel color distribution that does not represent any motion

of interest (Flickner teaches in the first stage, a temporal median filter is applied to

several seconds of video (typically 20-40 seconds) to distinguish "moving pixels" (pixels

corresponding to moving objects) from "stationary pixels" (pixels corresponding to

stationary objects) by monitoring color and assuming that a color that predominates at a

given pixel over time is representative of the background image, since any object

corresponding to a foreground image is expected to move in and out of the camera's

view over time [0025]. Since Flickner discloses to determine moving pixel from

stationary pixels by monitoring color and to predominate at a given time to be

considered background, it is clear to the examiner that Flickner teaches to have a

portion of the frame that is stationary represented with a color distribution, which reads

upon the claimed limitation); wherein the plurality of the frames comprises a selected

portion of a frame with the first pixel color distribution and another portion of the frame

with a second pixel color distribution (Flickner teaches in the first stage, a temporal

median filter is applied to several seconds of video (typically 20-40 seconds) to

distinguish "moving pixels" (pixels corresponding to moving objects) from "stationary

pixels" (pixels corresponding to stationary objects) by monitoring color and assuming

that a color that predominates at a given pixel over time is representative of the

background image, since any object corresponding to a foreground image is expected

to move in and out of the camera's view over time [0025]. Further disclosed is that

shopping carts themselves (and moving inanimate objects generally) may be detected

using color (step 140). The color of shopping carts may be modeled using a single 3-D

Gaussian distribution, with the pixel of any foreground silhouette pixel that has a color

similar to that distribution being classified as a pixel belonging to a shopping cart,

[0032]. Since Flickner discloses to determine moving pixel from stationary pixels by

monitoring color and to predominate at a given time to be considered background, it is

clear to the examiner that Flickner teaches to have a portion of the frame that is

stationary represented with a color distribution, and distinguish objects using a 3-D

Gaussian distribution, with the pixel of any foreground silhouette pixel that a color

similar to distribution, it is clear to the examiner that Flickner discloses to represent

foreground and background pixel in different color distributions which reads upon the

claimed invention).

12.   Therefore, it would have been obvious to one of ordinary skill in the art at the

invention to incorporate the teachings of Flickner with Monroe (modified by Pavlidis) for

allowing for more efficient tracking of persons and activities [0004].

Conclusion

13.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Contact

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to JESSICA ROBERTS whose telephone number is

(571)270-1821. The examiner can normally be reached on 7:30-5:00 EST Monday-

Friday, Alt Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Marsha D. Banks-Harold can be reached on (571) 272-7905. The fax

phone number for the organization where this application or proceeding is assigned is

571-273-8300.

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